MONTGOMERY WATSON

June 15, 1998

Mr. Michael Bellot, Remedial Project Manager
U.S. EPA, Region 5
Mail Code SR-16
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: Natural Attenuation Study
Blackwell Forest Preserve Landfill
DuPage County, Illinois

Dear Mr. Bellot:

On behalf of the Forest Preserve District of DuPage County (FPD), we are providing you with our comments regarding the U.S. Environmental Protection Agency's (U.S. EPA's) suggested clarifications/modifications to the proposed natural attenuation study at the Blackwell Landfill. The U.S. EPA's suggested clarifications/modifications were outlined in your March 23, 1998 correspondence, and were also discussed during an April 8, 1998 meeting and subsequent telephone conversations. We are also providing you, under separate cover, a revised Work Plan for the natural attenuation study which incorporates the modifications discussed below.

For your convenience, we have typed the Agency's comments in bold, with the clarifications/modifications provided below.

Comment:

. . . a comprehensive survey of terminal electron donors and products is especially useful. Specifically, the addition of sulfate/sulfide, nitrite, iron(II), chloride, methane, ethane and ethene analyses in groundwater would inexpensively provide this information.

Response:

Montgomery Watson agrees with the modifications proposed by the Agency. The revised Work Plan provides a full list of the field and laboratory parameters that will be performed as part of the natural attenuation study.

Comment:

Also, redox potential, dissolved oxygen, alkalinity and conservative tracers (for normalizing first-order decay constants) provide valuable degradation information and are similarly inexpensive analyses.

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Response:

Montgomery Watson agrees with this comment, and has incorporated these parameters into the proposed study.

Comment:

The addition of shallow aquifer wells G-144, G-118S, G-129, G-143, G-128S, G-142, G-127, and well G-102 as background, would give three transects over the approximately 3000 foot landfill cross-section.

Response:

Montgomery Watson and the U.S. EPA have subsequently agreed that only two transects, and a specific number of shallow aquifer wells, would be modeled in the natural attenuation study. Therefore, besides the four wells initially proposed for the study (i.e., G-130, G-107S, G-127 and G-122), the additional wells that will be included in the study consist of G-118S, G-129, and G-128S. The other wells requested by the U.S. EPA were either already included in the study (i.e., G-127), are located outside the two transects (i.e., G-144, G-143, and G-142), or is screened within a perched water table within a till unit that is not connected hydraulically to the shallow aquifer (i.e., G-102). The revised Work Plan provides further details of these monitoring wells and transects.

Comment:

Because the deeper aquifer is not as significant with regard to contamination, we recommend only the addition of wells G-138, G-139, G-140 and G-132 and G-134 as background.

Response:

Montgomery Watson has agreed with the U.S. EPA to collect the natural attenuation parameters from these five wells screened in the deep aquifer. However, as agreed to with the U.S. EPA, natural attenuation will be modeled only in the shallow aquifer.

Comment:

Also, the Agencies recommend that leachate be evaluated to determine daughter product ratios and for use in boundary calculations for modeling.

Response:

Montgomery Watson currently collects and analyzes leachate samples as part of other monitoring programs at the Site. The results of the leachate sampling will be incorporated into the natural attenuation study and used in the modeling.

Comment:

Additional information should be provided describing exactly what model will be used to investigate the effectiveness of natural attenuation, what data and steps will be needed to calibrate the model, and the how modeling results will be interpreted.

Response:

Montgomery Watson proposes to use the BIOSCREEN and Bioplume III models in the natural attenuation study. Details of these models, including data needs, calibration procedures, and interpretation procedures are outlined in the revised Work Plan.

We trust that the above response to Agency comments, and the attached revised Work Plan for the natural attenuation study are acceptable. If you have questions or need more information on the natural attenuation study program, please contact us at (630) 691-5000.

Sincerely,

MONTGOMERY WATSON

Peter Vagt, Ph.D., CPG
Vice President

Walter G. Buettner, P.E.
Supervising Engineer

cc: Rick Lanham – Illinois Environmental Protection Agency (3 copies)
Jerry Hartwig – Forest Preserve District of DuPage County
Manoj Mishra – Tetra Tech EM, Inc.
Kurt Lindland, Assistant Regional Counsel – U.S. EPA
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